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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---------------------|-------------|----------------------|---------------------|------------------|
| 10/721,194 | 11/24/2003 | Michael J. Mandella | PEN-104/US | 5526 |
| 7590 | | | EXAMINER | |
| 05/04/2005 | | | PRITCHETT, JOSHUA L | |
| ESPi | | | ART UNIT | PAPER NUMBER |
| Suite 2 | | | 2872 | |
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| Palo Alto, CA 94306 | | | | |

DATE MAILED: 05/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/721,194

Applicant(s)

MANDELLA, MICHAEL J.

Examiner

Joshua L. Pritchett

Art Unit

2872

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,2,6,8-12 and 14-22 is/are rejected.
- 7) ☒ Claim(s) 3-5,7 and 13 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 November 2003 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3/04, 11/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 9-12, 14, 15 and 17-22 rejected under 35 U.S.C. 102(b) as being anticipated by Powell (US 5,473,474).

Regarding claims 1 and 18, Powell discloses a solid catadioptric lens having a single view point on an optical axis comprising a spherical refractive surface (14) having a center on the optical axis (Fig. 1); an ellipsoidal reflective surface (16) facing the spherical refractive surface and having a first focus coincident with the center whereby the center is the single viewpoint (Fig. 1); and a shaping surface (18) facing the ellipsoidal reflective surface for shaping the light passing the single viewpoint (Fig. 1).

Regarding claim 9, Powell discloses the shaping surface is a reflective shaping surface and the solid catadioptric lens further comprises an aperture (20) for enforcing the single viewpoint (Fig. 1).

Regarding claim 10, Powell discloses the aperture is positioned at the ellipsoidal reflective surface (Fig. 1).

Regarding claim 11, Powell discloses the aperture is positioned beyond the ellipsoidal reflective surface (Fig. 1).

Regarding claims 12 and 20, Powell discloses the reflective shaping surface is a second ellipsoidal reflective shaping surface (col. 4 lines 40-41).

Regarding claim 14, Powell discloses the second ellipsoidal reflective shaping surface has a conic constant equal to a conic constant of the ellipsoidal reflective surface (col. 4 lines 38-41).

Regarding claim 15, Powell discloses an optical material having an index (Fig. 1).

Regarding claims 17 and 21, Powell discloses the shaping surface is an ellipsoidal shaping surface (col. 4 lines 40-41).

Regarding claim 19, Powell discloses an optical relay for passing the light (Fig. 2).

Regarding claim 22, Powell discloses the element is an imaging element (col. 1 lines 5-8).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2, 6, 8 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Powell in view of Garcia (US 6,789,908).

Regarding claims 2 and 16, Powell teaches the invention as claimed but lacks reference to the shaping surface being refractive or semi-transparent. Garcia teaches the shaping surface of a catadioptric lens being refractive and semi-transparent (Fig. 1). Fig. 1 shows the use of a refractive and semi-transparent elliptical surface in a lens with two elliptical surfaces and a shaping surface. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the Powell invention include a refractive shaping surface as taught by Garcia for the purpose of expanding the viewing angle of the imaging apparatus.

Regarding claim 6, Powell teaches the shaping surface is an ellipsoidal shaping surface (col. 4 lines 40-41).

Regarding claim 8, Powell discloses the second ellipsoidal reflective shaping surface has a conic constant equal to a conic constant of the ellipsoidal reflective surface (col. 4 lines 38-41).

Allowable Subject Matter

Claims 3-5, 7 and 13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Regarding claim 3, the prior art of record fails to teach or suggest the aperture positioned on the second focus of the ellipsoidal reflective surface.

Regarding claims 7 and 11, the prior art of record fails to teach or suggest the ellipsoidal shaping surface has a first focus coincident with the second focus of the ellipsoidal reflective surface.

Claim 4 and 5 depend from claim 3 and are allowable for the same reasons.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joshua L. Pritchett whose telephone number is 571-272-2318. The examiner can normally be reached on Monday - Friday 7:00 - 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew A. Dunn can be reached on 571-272-2312. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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A handwritten signature in black ink, appearing to read "Drew A. Dunn", written in a cursive style.

DREW A. DUNN
SUPERVISORY PATENT EXAMINER